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U.S. Army Influenza Activity Report

Week Ending 18 February 2012 (Week 7)

All data are preliminary and may change as more reports are received.

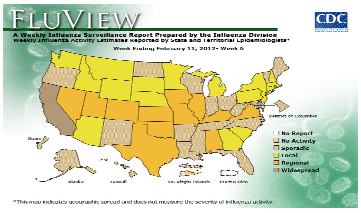
2011-2012 Seasonal Influenza Vaccination Coverage *As of 18 FEB 2012*	
96%	DOD
97%	Army Active Duty
92%	Army Guard
82%	Army Reserve

SYNOPSIS: 2011-2012 season influenza activity is increasing but overall activity is lower than last year.

- **Viral specimens:** During week seven, 229 specimens were submitted for testing, of which 31 were positive. Influenza A was identified in 8 (26%) of these positive samples.
- **Influenza cases:** 121 influenza cases have been reported in DRSI through week seven of the 2011-2012 season. Ten were reported with onset dates in week 7.
- **Outpatient ILI surveillance:** ILI activity within ESSENCE indicates both AD and beneficiary visits were lower this year than last year at this time.
- **Army MEDCEN & reporting trend:** RSV and Influenza A were the most commonly identified respiratory pathogens, accounting for 55% and 26% of positive specimens, respectively.

(See Page 2 for an H3N2v update)

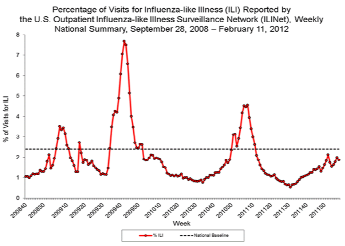
Geographic Spread



United States

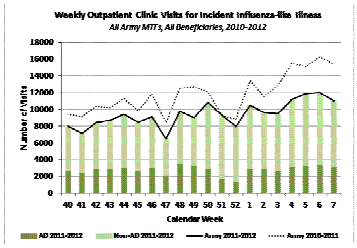
- Widespread influenza activity was reported in California.
- Twelve states reported regional activity (AL, CO, IL, IA, KS, KY, MO, NV, OK, TX, UT, and VA).
- The remaining states and territories reported sporadic cases or no influenza.

ILI Activity United States



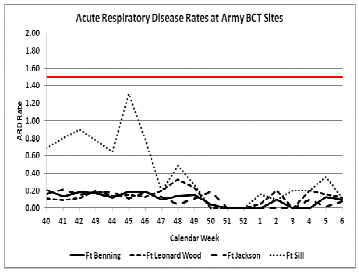
- For week six (2012), 1.9% of outpatient visits reported through ILINet were due to influenza-like illness (ILI).
- This percentage is below the national baseline of 2.4%.

ILI Activity Army



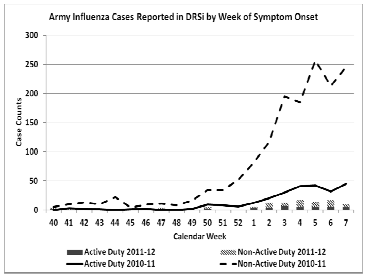
- Over the last four weeks, Army ILI outpatient visits were 26% lower than during the same time period of the 2010-2011 influenza season.
- Visit counts decreased slightly compared to the previous week; this is similar to the trend observed last year at this time.

Acute Respiratory Disease Surveillance



- ARD rates remain low at all BCT sites.
- Full adenovirus vaccine coverage has been achieved at the sites.
- ARDS rates should not be compared between sites due to variations in data collection. The rates reflect temporal changes at each site.

DRSi Influenza Case Reporting



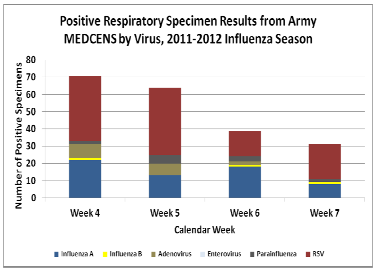
- 121 cases (10 with onset dates in week 7) have been reported in the 2011-2012 season.
- Forty-three (36%) were among active duty Soldiers and 78 (64%) were among dependents.
- Sixteen (13%) cases required hospitalization.

Army Laboratory Testing

Army MEDCEN Laboratory Results

Test Result	Week 4	Week 5	Week 6	Week 7	Total
Influenza A	22	13	18	8	61
Influenza B	1	0	1	1	3
Adenovirus	8	7	2	0	17
Enterovirus	0	0	0	0	0
Parainfluenza	2	5	3	2	12
RSV	38	39	15	20	112
Negative	377	330	316	198	1221
Total Results	448	394	355	229	1426

- In the last 4 weeks, 205 (14%) of the 1,426 samples submitted were positive for a respiratory disease organism.
- Of positive samples, 55% were identified as RSV.
- Parainfluenza and adenovirus accounted for 6% and 8% of all positive samples, respectively.
- Influenza A accounted for 30% of positive specimens in the last four weeks and 26% of positive samples in week seven.
- Seven MEDCENs submitted reports for week seven (2012).



Additional Resources: CDC; AFHSC Influenza Reports; Army Influenza Reports; ARD Reports; NHRC FRI Reports ; DoD Global Influenza Surveillance Program; DoD Pandemic Influenza Watchboard

Key: ILI - Influenza-Like Illness; DRSi- Disease Reporting System Internet; ARD - Acute Respiratory Disease; NHRC - Naval Health Research Center; ADV - Adenovirus; RSV - Respiratory Syncytial Virus

Questions?
http://phc.amedd.army.mil

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Influenza A(H3N2v) Pandemic Potential

Source: ProMED (International Society for Infectious Diseases). Published: 22 February 2012. Archive: 20120222.1049306

- Recently, the results of a CDC study of an H3N2 swine variant virus [swine influenza A/H3N2v virus] that caused sporadic cases in the U.S. (n=12) through the second-half of 2011 (and perhaps in Viet Nam), were published.
- The study examined the genetic shift of H3N2 variant viruses from 2009-2011.
- The virus is well-adapted to infect mammals and a genetic mutation present in the 2011 virus may increase infectivity of the virus, but the impact is not fully elucidated.
    - Via subunit reassortment, the H3N2 variant acquired an M gene from the 2009 H1N1 pandemic virus.
- Regarding the 2010 and 2011 variant H3N2 viruses, study authors noted very efficient transmission events, similar to that observed with seasonal H3N2 (the typical human-adapted H3N2 virus) while variant H3N2 has recently been transmitted from a swine origin.
- The researchers studied influenza transmission in ferrets and determined that the H3N2v virus appears to have pandemic potential, though they note the lack of widespread infection may have more to do with human immunity that with the viruses themselves. There are two current theories surrounding the immunity hypothesis.
    - The H3N2v may require a certain receptor in the respiratory tract which is not common in humans. This is the same reason for low infectivity of the H5N1 or avian influenza strain that has recently infected humans.
    - Immunity exists from the original H3N2 transmission to swine from humans in the early 1990's. The human and swine variants have since evolved separately, but humans infected with H3N2 in the early 1990's may have antibodies which reduce their susceptibility to the new H3N2v.
- In April 2011, Viet Nam claimed the first patient who was infected with swine influenza (H3N2); this was confirmed by the World Health Organization on 10 January 2012.
    - The case is a 2 year-old girl from southern Long An province who was treated in April and recovered.
    - It has yet to be established whether this swine (H3N2) influenza virus is similar to the reassortent swine H3N2 variant virus responsible for the cases of human disease in the latter half of 2011 in the United States.
- It is recommended that vaccines for use in the 2012-2013 influenza season (northern hemisphere winter) contain the following:(http://www.who.int/influenza/vaccines/virus/recommendations/201202_recommendation.pdf>).
    - an A/California/7/2009 (H1N1)pdm09-like virus
    - an A/Victoria/361/2011 (H3N2)-like virus
    - a B/Wisconsin/1/2010-like virus

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